

## REMARKS

### Allowable Subject Matter

Applicants gratefully acknowledge the Examiner's indication that claims 20-24 recite allowable subject matter, and that claims 35, 36 and 38 are allowed.

### Amendments

New claim 40 is similar to claim 1, except that the first effluent is described as being essentially devoid of linear and monobranched paraffins. See, e.g., Table 3 wherein the ration  $\alpha$  foethe EU-1 zeolite is listed as  $\infty$ .

### Rejections Under 35 USC §102(b) and §103

Claims 1, 2, 19, 28-34 and 39 are rejected as allegedly being anticipated in view of Zinnen et al. (U.S. 5,744,684). This rejection is respectfully traversed. In addition, claims 25-27 and 37 are rejected as allegedly being obvious in view of Zinnen et al. (U.S. 5,744,684). This rejection is also respectfully traversed.

The process of US '684 involves isomerizing an alkane mixture which contains pentanes and at least one alkane having 6-8 C atoms, with no more than one methyl branch. In the process, after passing the feed through a separation zone, a stream discharged from the separation zone which is enriched in alkanes having from 6 to about 8 C atoms, as well as a stream enriched in n-pentanes, are delivered to an isomerization zone. From the isomerization zone, two streams are produced. The first stream contains branched pentanes, n-pentane, and multi-branched alkanes having 6-8 C atoms. The second stream contains branched pentanes and n-pentane.

Referring to Fig. 1 of U.S. '684, from the isomerization zone 21 there is discharged both a raffinate stream 6 and an extract stream 7. The raffinate 6 is described as containing n-pentane desorbent and isomerized products, i.e., the isomerized products that are less strongly adsorbed by the adsorbent materials in the isomerization zone. These products include, for example, 2-methylbutane (a branched pentane) and 2,3-dimethylbutane (multi-branched alkane). See column 7, lines 33-48. The extract, on the other hand, is characterized as containing "mainly undesired by products, n-pentane desorbent, and branched pentanes." See column 7, lines 59-60.

In the rejection, it is asserted that US '684 "discloses a process for separating normal and mono paraffins from multibranched paraffins in a mixture by contacting the mixture with

an adsorbent of EU-1 to produce a stream rich in mono branched paraffin, and a stream rich in multibranched paraffin." This statement is incorrect.

As discussed above, in the process of US '684 two streams are discharged from the isomerization section, the raffinate and the extract. The raffinate 6, as shown in Table 1, contains 37.3% multibranched paraffins and 59% normal and monobranched C5-C7 paraffins. Extract 7 contains, as shown in Table 1, no multibranched paraffins and 88.6% normal and monobranched C5-C7 paraffins. Thus, in comparison to normal and multibranched paraffins, neither the raffinate nor extract is rich in multibranched paraffins.

In the rejection, the Examiner argues that the first fraction of US '684 "comprises multibranched paraffins and the multibranched paraffins are an essential component in the first fraction." Based on this argument, the Examiner concludes that the first fraction of US '684 consists essentially of multibranched paraffins.

Firstly, the argument that multibranched paraffins are an essential component is a conclusory assertion, unsupported by any rationale. Merely because something is present that does not mean that something is essential. Secondly, the Examiner's conclusion concerning "consisting essentially of" is not consistent with well established law.

Under long standing U.S. case law, the phrase "consisting essentially of" is interpreted as excluding ingredients that would materially affect the basic and novel characteristics of the invention. See, e.g., *Atlas Powders Co. v. E. I. du Pont De Nemours & Co.*, 224 USPQ 409, 412 (Fed. Cir. 1984). The rejection present no rationale as to why adding in over 50% of normal and multibranched paraffins to a stream of multibranched paraffins. Clearly, the inclusion of such a large amount of normal and multibranched paraffins would affect the basic and novel characteristics of a stream consisting essentially of multibranched paraffins. Furthermore, the rejection is devoid of any explanation as to why one of ordinary skill in the art would be motivated to modify the first fraction of US '684 so that it did not contain an amount of normal and multibranched paraffins, so as to be a stream consisting essentially of multibranched paraffins.

In view of the above remarks, it is respectfully submitted that Zinnen et al. fails to anticipate and/or render obvious applicants' claimed invention. Withdrawal of the rejections under 35 USC §102(b) and §103 is respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

  
Brion R. Heaney (Reg. No. 32,542)  
Attorney for Applicants

MILLEN, WHITE, ZELANO & BRANIGAN, P. C.  
2200 Clarendon Boulevard, Suite 1400  
Arlington, Virginia 22201  
(703)812-5308  
Internet address: [heaney@mwzb.com](mailto:heaney@mwzb.com)

Filed: September 3, 2003